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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,481	08/01/2006	Soon Ho Ahn	LEE0082US	8797
23413 7590 12/14/2010 CANTOR COLBURN LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER WEINER, LAURA S				
ART UNIT		PAPER NUMBER		
1726				
NOTIFICATION DATE		DELIVERY MODE		
12/14/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary

Application No.

10/588,481

Applicant(s)

AHN ET AL.

Examiner

/Laura S. Weiner/

Art Unit

1726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14, 16-22 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) 26-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-14, 16-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-506)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-8-2010 has been entered.

Election/Restrictions

2. Applicant's election without traverse of a first additive being a biphenyl and a second additive being cyclohexylbenzene in the reply filed on 2-11-2010 is acknowledged.
3. Newly submitted claims 26-29 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 26 claims an electrolyte solvent where the second additive cannot be a cyclohexylbenzene. Claim 27 which depend from claim 26 claims that the first additive can be a biphenyl but claim 10 has been amended so that the first additive can no longer be a biphenyl. Claim 29 which depend from claim 28 which depends from claim 26 claims that the first additive

can be a biphenyl but claim 10 has been amended so that the first additive can no longer be a biphenyl.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 26-29 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

4. Applicant's arguments with respect to claims 10-14, 16-22, 24-25 have been considered but are moot in view of the new ground(s) of rejection.

The rejection of claims 10-14, 16-22, 24-25 rejected under 35 U.S.C. 102(b)/(e) as being anticipated by Abe et al. [(WO 02/059999)/(US 7,294,436)] and the rejection of claims 10-14, 16-17, 18-22, 24-25 rejected under 35 U.S.C. 102(b)/(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Abe et al. [(WO 02/059999)/(US 7,294,436)] has been withdrawn because tert-butylbenzene has been removed from claim 10,

Since applicant has removed biphenyl and now removed tert-butylbenzene from claim 10, a new species was found which was fluorine atom substituted biphenyl or specifically, 2-fluorobiphenyl or fluorine atom substituted benzene for the first additive and biphenyl or cyclohexylbenzene for the second additive.

Claim Rejections - 35 USC § 102

5. Claims 10-14, 16-22, 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hinohara et al. (JP 2003-257479, translation).

Hinohara et al. teaches on page 4 of the translation a battery comprising an electrolyte comprising 0.1-20 wt% of a fluorine atom substituted aromatic compound [*first additive*] and 0.1-3 wt% of an aromatic hydrocarbon compound [*second additive*]. Hinohara et al. teaches on pages 5-6 of the translation that the fluorine atom substituted aromatic compound can be a fluorine atom substituted benzene, a fluorine atom substituted biphenyl, such as 2-fluorobiphenyl, etc. Hinohara et al. teaches on page 6 of the translation, that the aromatic hydrocarbon compound can be cyclohexylbenzene, biphenyl, etc. Hinohara et al. teaches on page 14 and table 1, that the electrolyte comprises ethylene carbonate, methyl ethyl carbonate, LiPF₆ and 2-fluorobiphenyl (FBP) and biphenyl (BP) or cyclohexylbenzene (CHB). Hinohara et al. teaches on page 15, that the battery comprises an anode comprising graphite, a separator and a cathode comprising LiCoO₂.

Claim Rejections - 35 USC § 103

6. Claims 10-14, 16-17, 18-22, 24-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hinohara et al. (JP 2003-257479, translation).

Hinohara et al. teaches on page 4 of the translation a battery comprising an electrolyte comprising 0.1-20 wt% of a fluorine atom substituted aromatic compound [*first additive*] and 0.1-3 wt% of an aromatic hydrocarbon compound [*second additive*]. Hinohara et al. teaches on pages 5-6 of the translation that the fluorine atom substituted aromatic compound can be a fluorine atom substituted benzene, a fluorine atom substituted biphenyl, such as 2-fluorobiphenyl, etc. Hinohara et al. teaches on page 6 of the translation, that the aromatic hydrocarbon compound can be cyclohexylbenzene, biphenyl, etc. Hinohara et al. teaches on page 14 and table 1, that the electrolyte comprises ethylene carbonate, methyl ethyl carbonate, LiPF₆ and 2-fluorobiphenyl (FBP) and biphenyl (BP) or cyclohexylbenzene (CHB). Hinohara et al. teaches on page 15, that the battery comprises an anode comprising graphite, a separator and a cathode comprising LiCoO₂.

Since Hinohara et al. teaches the same first additive compound, a fluorine atom substituted biphenyl, such as 2-fluorobiphenyl, and the same second additive, a biphenyl or a cyclohexylbenzene then inherently the same first additive compound having an oxidation initiation potential of more than 4.2V or 4.2-5.3 V or 4.5-4.9 V and a second additive compound with an oxidation initiation voltage of more than 4.2 V or 4.2-5.3 V or 4.5-4.9 V which is higher in oxidation initiation potential than the first additive,

and deposits oxidative products or forms a polymer film in oxidation must also be obtained.

In addition, the presently claimed property of first additive compound having an oxidation initiation potential of more than 4.2V and a second additive compound with an oxidation initiation voltage of more than 4.2 V which is higher in oxidation initiation potential than the first additive, and deposits oxidative products or forms a polymer film in oxidation would have obviously have been present once the Hinohara et al. product is provided. *In re Best*, 195 USPQ 433 (CCPA 1977).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Laura S. Weiner/ whose telephone number is 571-272-1294. The examiner can normally be reached on M-H (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura S Weiner/
Primary Examiner
Art Unit 1726

December 7, 2010